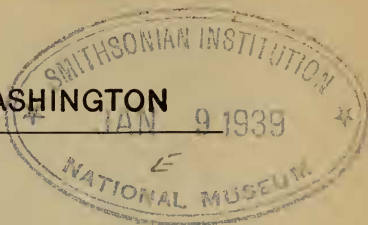


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTONGEOGRAPHIC VARIATION IN *NEOTOMA LEPIDA*
IN WEST-CENTRAL CALIFORNIA.

BY JACK C. VON BLOEKER, JR.

A study of the wood rats of the species *Neotoma lepida* inhabiting the Pacific drainage slope of California has been made recently at the Museum of Vertebrate Zoology by the writer. The results of this study indicate the existence of two separate geographic races in the Coast Range Mountains of west-central California, one in the Gabilan-Diablo Range and one in the Santa Lucia-Sierra de Salinas Range. The former of these was described in 1894 as *Neotoma californica* by W. W. Price but, presumably because of the lack of sufficient comparative material, has been since referred to *Neotoma lepida intermedia* by E. A. Goldman (1910 and 1932) and subsequent authors.

Field work in San Benito and Monterey counties in 1936 and 1937 has resulted in the acquisition of new material for comparison which, together with series of previously collected specimens in the Museum of Vertebrate Zoology, the California Academy of Sciences, the Stanford Museum, and the Los Angeles Museum, has provided the basis for the above-mentioned study. The two subspecies appearing to merit recognition may be described as follows:

***Neotoma lepida californica* Price.**

CALIFORNIA WOOD RAT.

Neotoma californica Price (1894 : 154-156).*Neotoma intermedia* Goldman (1910 : 42).*Neotoma lepida intermedia*, Goldman (1932 : 64).

Type.—♂ adult, skin and skull, no. 335, Stanford University Museum, from Bear Valley, San Benito County, California, April 2, 1893, collected by C. H. Gilbert and W. W. Price.

Distribution.—Inner Coast Range from Mount Hamilton, Santa Clara County, east to Herrero Canyon, Merced County, and south through Gabilan-Diablo Range at least to Lewis Creek, Monterey County. Ranges altitudinally from 200 feet up to 4400 feet.

Diagnosis.—A medium-sized (see measurements), moderately light-colored wood rat of the *lepida* group, darker than *Neotoma l. gilva* and lighter than *Neotoma l. intermedia*; skull long, narrow, and relatively high; incisive foramina about equal to palatal bridge in length; auditory bullae broad.

Comparisons.—Compared with *Neotoma l. gilva*, total length shorter, tail actually and relatively shorter, hind foot and ear longer; skull longer and relatively narrower, with longer nasals and greater depth of skull, length of incisive foramina shorter, palatal bridge longer, auditory bullae broader; color darker dorsally. Compared with *Neotoma l. intermedia*, total length and tail shorter; skull relatively broader throughout, depth of skull greater, incisive foramina shorter and palatal bridge longer, auditory bullae broader; color lighter dorsally.

Color (using color terms from Ridgway's *Color Standards and Color Nomenclature*, 1912).—Type: Dorsal body hairs with basal portions dark plumbeous, broad subterminal bands ochraceous buff, and tipped with black; hairs of throat and belly deep plumbeous basally, broadly tipped with white; hairs of large area in both pectoral and pelvic regions, and upper surfaces of feet entirely white; tail bicolor, hairs of dorsal stripe ochraceous buff basally with long black tips, becoming increasingly black as apical portion of tail is approached, hairs of ventral surface of tail entirely cinereous.

Measurements (in millimeters).—Averages and extremes of ten adults and subadults (7 males and 3 females): Total length, 329 (306–345); tail, 154 (140–162); ratio, tail to total length, 46.8%; ratio, tail to head and body, 88.0%; hind foot, 34 (31–37); ear, 30 (26–33). Skull: Basilar length, 34.1 (32.6–35.0); ratio, basilar length to total length, 10.4%; greatest zygomatic breadth, 21.7 (21.0–23.0); ratio, zygomatic breadth to basilar length, 64.0%; length of nasals, 15.9 (15.2–16.7); ratio, length of nasals to basilar length, 46.4%; depth of skull, 15.2 (14.5–15.8); ratio, depth of skull to basilar length, 45.8%; ratio, depth of skull to zygomatic width, 70.1%; least interorbital breadth, 5.7 (5.4–6.1); length of incisive foramina, 8.1 (8.0–8.2); ratio, length of incisive foramina to basilar length, 23.8%; length of palatal bridge, 8.0 (7.8–8.4); ratio, length of palatal bridge to basilar length, 23.5%; ratio, length of palatal bridge to length of incisive foramina, 98.9%; breadth of bulla, 7.4 (7.2–7.8); alveolar length of maxillary tooth row, 8.0 (7.6–8.3); ratio, maxillary tooth row to basilar length, 23.2%; alveolar length of mandibular tooth row, 7.7 (7.5–7.9); ratio, mandibular tooth row to basilar length, 22.5%; ratio, mandibular tooth row to maxillary tooth row, 96.9%.

Specimens examined.—Unless otherwise indicated, specimens are in the collection of the Museum of Vertebrate Zoology. Thirty-eight, from the following localities in California: SANTA CLARA COUNTY: Mount Hamilton, 4¹; MERCED COUNTY: Sweeney's Ranch, 1200 feet, Herrero Canyon,

¹ Stanford University Museum.

22 miles south of Los Banos, 9; SAN BENITO COUNTY: Gabilan Mountains, 4400 feet, 1 mile southeast of the summit of San Benito Mountain, 2; San Benito Valley, 1600 feet, 6 miles east-southeast of San Benito, 5; Diablo Range, 1900 feet, 2 miles north-northeast of New Idria, 3; Cook Post-office, 1300 feet, Bear Valley, 1; Bear Valley, 3¹; MONTEREY COUNTY: Strawberry Canyon, 200 feet, 1²; Stonewall Creek, 1300 feet, 6.3 miles northeast of Soledad, 3²; mouth of Stonewall Creek, 300 feet, 4 miles northeast of Soledad, 5²; Diablo Range, 350 feet, 4 miles east of King City, 1²; Lewis Creek, 1750 feet, Diablo Range, 1.²

***Neotoma lepida petricola*, subsp. nov.**

ARROYO SECO WOOD RAT.

Type.—♀ adult, skin and skull, no. 30202, Museum of Vertebrate Zoology, from Abbott's Ranch, 670 feet altitude, Arroyo Seco, Monterey County, California, July 19, 1919, collected by H. G. White, orig. no. 3525.

Distribution.—Santa Lucia and Sierra de Salinas mountains, Monterey County, California, from Big Pines south at least to Mount Mars. Altitudinal range extends from 600 feet up to 5000 feet.

Diagnosis.—A small-sized (see measurements), moderately dark-colored wood rat of the *lepida* group, darker than either *N. l. gilva* or *N. l. californica*, but lighter than *N. l. intermedia*; skull short, broad, and relatively low; incisive foramina long and narrow; auditory bullae moderately broad.

Comparisons.—Compared with *Neotoma l. gilva*, total length shorter, tail actually and relatively shorter, ear smaller; skull relatively shorter and narrower; color darker. Compared with *N. l. intermedia*, total length shorter, tail relatively longer, hind feet and ears smaller; skull shorter and relatively broader; color lighter. Compared with *N. l. californica*, total length shorter, tail relatively longer, hind feet and ears smaller; skull shorter and relatively broader; color darker.

Color.—Type: Dorsal body hairs with basal portions blackish plumbeous, narrow subterminal bands ochraceous tawny, and tipped with black; hairs of throat, belly and ventral surfaces of legs slate color basally, narrowly tipped with white; hairs of small area in both pectoral and pelvic regions, on upper surfaces of feet and ventral surface of tail entirely white; tail bicolor, hairs of dorsal stripe ochraceous tawny basally, with long white tips, becoming brownish toward apical portion of tail.

Measurements.—Averages and extremes of nine adults and sub-adults (2 males and 7 females): Total length, 318 (314–325); tail, 152 (138–157); ratio, tail to total length, 47.8%; ratio, tail to head and body, 92.7%; hind foot, 33 (31–35). Skull: Basilar length, 33.4 (30.8–35.0); ratio, basilar length to total length, 10.5%; greatest zygomatic breadth, 22.0 (20.9–22.5); ratio, zygomatic breadth to basilar length, 65.6%; length of nasals, 15.7 (14.7–16.2); ratio, length of nasals to basilar length, 47.1%; depth of skull, 14.6 (13.3–15.2); ratio, depth of skull to basilar length, 43.8%; ratio, depth of skull to zygomatic width, 66.5%; least interorbital breadth, 5.6 (5.4–5.8);

² O. P. Silliman collection.

³ Los Angeles Museum.

length of incisive foramina, 8.8 (8.1-9.3); ratio, length of incisive foramina to basilar length, 26.3%; length of palatal bridge, 7.8 (7.5-8.0); ratio, length of palatal bridge to basilar length, 23.3%; ratio, length of palatal bridge to length of incisive foramina, 86.4%; breadth of bulla, 7.0 (6.7-7.2); alveolar length of maxillary tooth row, 8.2 (7.8-8.5); ratio, maxillary tooth row to basilar length, 24.3%; alveolar length of mandibular tooth row, 7.6 (7.3-8.0); ratio, mandibular tooth row to basilar length, 22.8%; ratio, mandibular tooth row to maxillary tooth row, 92.7%.

Specimens examined.—Sixteen, from the following localities in California: MONTEREY COUNTY: Abbott's Ranch, 670 feet, Arroyo Seco, 4; Big Pines, 4000 feet, Santa Lucia Mountains, 1; Chew's Ridge, 5000 feet, Santa Lucia Mountains, 1⁴; China Camp, 4500 feet, Santa Lucia Mountains, 1⁴; Mal Paso Creek, south of Point Lobos, 2⁵; head of Big Creek, Santa Lucia Mountains, 2⁵; Willow Creek, Santa Lucia Mountains, 3⁵; Mount Mars, 2.⁵

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⁴ O. P. Silliman collection.

⁵ California Academy of Sciences.